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| 10/018,502 | 02/11/2002 | Kimmo Narkilahti | 4925-159PUS | 2649 |

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| EXAMINER |
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| ART UNIT | PAPER NUMBER |
|---|---|
| 2617 | |

DATE MAILED: 06/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | Application No. | Applicant(s) |
| :--- | :--- | :--- |
| **Office Action Summary** | 10/018,502 | NARKILAHTI ET AL. |
| | Examiner | Art Unit | |
| | Sharad Rampuria | 2617 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1) ☒ Responsive to communication(s) filed on *30 March 2006.*
2a) ☒ This action is **FINAL**.      2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle,* 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

4) ☒ Claim(s) *1-25* is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) *1-25* is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

## Application Papers

9) ☒ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a)☐ All   b)☐ Some * c)☐ None of:

         1.☐ Certified copies of the priority documents have been received.

         2.☐ Certified copies of the priority documents have been received in Application No. _____ .

         3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
     Paper No(s)/Mail Date _____ .

4) ☐ Interview Summary (PTO-413)
     Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____ .

# DETAILED ACTION

I.     The current office-action is in response to the amendments/remarks filed on 03/30/2006.

II.    Accordingly, Claims 19-25 are newly added, consequently, Claims 1-25 are pending for

further examination as follows:

## *Specification*

III.    The title of the invention is not descriptive. A new title is required that is clearly

indicative of the invention to which the claims are directed.

The following title is suggested: "Method and System for Determining of Operating

Modes of Users of a Telecommunication System."

## *Claim Rejections - 35 USC § 103*

IV.    The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section

102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject

matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to

which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the

Claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various

Claims was commonly owned at the time any inventions covered therein were made absent any

evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out

the inventor and invention dates of each Claim that was not commonly owned at the time a later

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c)

and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).


V.      Claims 1-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Knight et al.

[GB 2327175] in view of Amin [US 6167261].


Regarding Claim 1, Knight discloses a method for determining the behavior patterns of

the users of a telecommunication system on the basis of information collected from the system

(Pg.1; 26-35), characterized in that

At least one variable or a combination of variables of the telecommunication system is

defied, (Pg.3; 16-24)

User-specific information corresponding to the defied at least one variable or a

combination of variables is filtered from the information collected from the telecommunication

system, (Pg.3; 15-Pg.5; 34) and

Knight fails to disclose the users of the telecommunication system are classified on the

basis of the filtered user-specific information into various classes indicative of a user's behaviour

patterns during use of the telecommunication system. However, Amin teaches in an analogous

art, that the users of the telecommunication system are classified on the basis of the filtered user-

specific information into various classes indicative of a user's behaviour patterns during use of

the telecommunication system. (Col.4; 37-Col.6; 21). Therefore, it would have been obvious to

one of ordinary skill in the art at the time of invention to include the users of the

telecommunication system are classified on the basis of the filtered user-specific information into

various classes indicative of a user's behaviour patterns during use of the telecommunication

system in order to managing the resources of a wireless communication network to efficiently

accommodate different types of wireless communication devices and associated services.


Regarding Claim 2, Knight discloses a method according to Claim 1, characterized in that

said user-specific information is filtered from the telecommunication system in real time. (Pg.4;

15-21)


Regarding Claim 3, Knight disclose a method according to Claim 1, characterized in that

after said filtering of information the filtered information is saved (3; fig.1) for later analysis.

(Pg.3; 20-24)


Regarding Claim 4, Knight discloses a method according to Claim 1, characterized in

that after the classification; statistical analysis is carried out on the classified information. (8;

fig.1; Pg.5; 14-24 & Pg.4; 23-29)


Regarding Claim 5, Knight disclose a method according to Claim 4, characterized in that

parameters essential for the quality of service of the telecommunication system are regulated on

the basis of said statistical analysis (Pg.4; 31-Pg.5; 4).

Regarding Claim 6, Knight disclose a method according to Claim 4, characterized in that on the basis of said statistical analysis, conclusions are drawn about the behaviour of a certain group of users in a telecommunication system. (Pg.5; 5-12)

Regarding Claim 7, Knight discloses all the particulars of the Claim except the classes of behaviour patterns used in the classification of users are defined in connection with the definition of variables. However, Amin teaches in an analogous art, that a method according to Claim 1, characterized in that the classes of behaviour patterns used in the classification of users are defined in connection with the definition of variables (Col.4; 37-Col.6; 21).

Regarding Claim 8, Knight discloses all the particulars of the Claim except the definitions of the classes of behaviour patterns used in the classification of users are changed. However, Amin teaches in an analogous art, that a method according to Claim 1, characterized in that the definitions of the classes of behaviour patterns used in the classification of users are changed (Col.4; 37-Col.6; 21).

Regarding Claim 9, Knight discloses all the particulars of the Claim except filtered unclassified information is classified into said new classes of behaviour patterns. However, Amin teaches in an analogous art, that a method according to Claim 8, characterized in that said filtered unclassified information is classified into said new classes of behaviour patterns (Col.4; 37-Col.6; 21).

Regarding Claim 10, Knight discloses all the particulars of the Claim except at least one of the variables is the type of contract of the user. However, Amin teaches in an analogous art, that a method according to Claim 1, characterized in that at least one of the variables is the type of contract of the user (Col.4; 37-Col.6; 21).

Regarding Claim 11, Knight discloses all the particulars of the Claim except the type of system service. However, Amin teaches in an analogous art, that a method according to Claim 1, characterized in that at least one of the variables is the type of system service. (Col.4; 37-Col.6; 21)

Regarding Claim 12, Knight disclose a method according to Claim 1, characterized in that said telecommunication system is a mobile communication system (1; fig.1; Pg.1; 7-10)

Regarding Claim 13, Knight discloses a system for determining the users' patterns of behaviour in a telecommunication system (Pg.1; 26-35, Abstract), characterized in that said system comprises;

Means for defining at least one variable or a combination of variables of the telecommunication system. (Pg.3; 16-24)

Filtering means for filtering said user-specific information corresponding to at least one variable or a combination of variables from the information received from the telecommunication system, (Pg.3; 15-Pg.5; 34) and

Knight fails to disclose classifying means for classifying the users of the

telecommunication system on the basis of said filtered user-specific information. However,

Amin teaches in an analogous art, that classifying means for classifying the users of the

telecommunication system on the basis of said filtered user-specific information into various

classes indicative of a user's behaviour patterns during use of the telecommunication system

(Col.4; 37-Col.6; 21, Abstract).

Regarding Claim 14, Knight discloses a system according to Claim 13, characterized in

that the system is designed to process the information received from the telecommunication

system in real time. (Pg.4; 15-21)

Regarding Claim 15, Knight discloses a system according to Claim 13, characterized in

that the system has a memory (3; fig.1) for saving said filtered user-specific information. (Pg.3;

20-24)

Regarding Claim 16, Knight discloses all the particulars of the Claim except filtered

unclassified information is classified into said new classes of behaviour patterns. However, Amin

teaches in an analogous art, that a system according to Claim 13, characterized in that the system

has analysis means for statistical analysis of the classification of the behaviour patterns of users

received from the classifying means and/or for defining new classes of behaviour patterns (Col.4;

37-Col.6; 21).

Regarding Claim 17, Knight disclose a system according to Claim 13, characterized in that the system has regulating means for regulating the values of parameters essential for the quality of service of the telecommunication system on the basis of the information received from the analysis means. (Pg.1; 26-35 & Pg.2; 9-18)

Regarding Claim 18, Knight disclose a system according to Claim 13, characterized in that said telecommunication system is a mobile communication system (1; fig.1; Pg.1; 7-10)

Regarding Claim 19, Knight disclose a telecommunication system for determining the behaviour patterns of users of the telecommunication system on the basis of information collected from the system, (Pg.1; 26-35, Abstract) comprising:

At least one base station; (e.g. 2; Fig.1, inherently included network system; Pg.3; 15-24)

At least one mobile services switching center (MSC) for establishing a connection to a mobile station and generating connection information; (e.g. 2; Fig.1, inherently included network system; Pg.3; 15-24)

At least one network management system for monitoring and managing operation of the telecommunication system; (e.g. 2; Fig.1, inherently included network system; Pg.3; 15-24)

A customer register for receiving the connection information from the at least one MSC; (e.g. 2; Fig.1, inherently included network system; Pg.3; 15-24)

A statistical unit for receiving statistical information from the at least one NMS; (e.g. 2; Fig.1, inherently included network system; Pg.3; 15-24)

A filter configured to filter said user-specific information corresponding to at least one

variable or a combination of variables from the information received from the

telecommunication system, said at least one variable or a combination of variables being defined

in the telecommunication system; (Pg.3; 15-Pg.5; 34) and

Knight fails to disclose a classifier configured to classify the users of the

telecommunication system on the basis of said filtered user-specific information into various

classes indicative of a user's behaviour patterns during use of the telecommunication system.

However, Amin teaches in an analogous art, that a classifier configured to classify the users of

the telecommunication system on the basis of said filtered user-specific information into various

classes indicative of a user's behaviour patterns during use of the telecommunication system

(Col.4; 37-Col.6; 21, Abstract).

Regarding Claim 20, Knight discloses a system according to Claim 19, characterized in

that the system is designed to process the information received from the telecommunication

system in real time. (Pg.4; 15-21)

Regarding Claim 21, Knight discloses a system according to Claim 19, characterized in

that the system has a memory (3; fig.1) for saving said filtered user-specific information. (Pg.3;

20-24)

Regarding Claim 22, Knight discloses all the particulars of the Claim except filtered

unclassified information is classified into said new classes of behaviour patterns. However, Amin

teaches in an analogous art, that a system according to Claim 19, characterized in that the system has analysis means for statistical analysis of the classification of the behaviour patterns of users received from the classifying means and/or for defining new classes of behaviour patterns (Col.4; 37-Col.6; 21).

Regarding Claim 23, Knight disclose a system according to Claim 19, characterized in that the system has regulating means for regulating the values of parameters essential for the quality of service of the telecommunication system on the basis of the information received from the analysis means. (Pg.1; 26-35 & Pg.2; 9-18)

Regarding Claim 24, Knight disclose a system according to Claim 19, characterized in that said telecommunication system is a mobile communication system (1; fig.1; Pg.1; 7-10)

*Claim 25* is the computer readable medium claim corresponding to system claim 13 respectively, and rejected under the same rational set forth in connection with the rejection of claim 13 respectively, above.

### *Response to Amendment/Remarks*

VI.    Applicant's arguments with respect to claims 1-25 has been fully considered but is moot in view of the new ground(s) of rejection.

## *Conclusion*

VII.    Applicant's amendment necessitated the new ground(s) of rejection presented in this

Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing

date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Sharad Rampuria whose telephone number is (571) 272-7870.

The examiner can normally be reached on M-F. (8:30-5).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, George Eng can be reached on (571) 272-7495. The fax phone number for the

organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://portal.uspto.gov/external/portal/pair. Should you have questions on access to

the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-

free) or *EBC@uspto.gov*.


Sharad Rampuria
Examiner
Art Unit 2617


GEORGE ENG
SUPERVISORY PATENT EXAMINER